EROSION PREVENTION AND SEDIMENT CONTROL NARRATIVE

PROJECT DESCRIPTION

This project involves south bound widening of existing 10 ft shoulders to new 12 ft truck lanes, as well as new 6 ft shoulders in the south bound lane. Work will also include subbase, grading, guardrail, and other roadway related items. There are no historical or archeologically sensitive sites on or near the project site, nor are there any 'Threatened & Endangered Species' on or near the project site.

It is anticipated that this project will last one construction season.

Area of disturbance is approximately 0.60 acres.

SITE INVENTORY AND ANALYSIS

OFF SITE DRAINAGE CHARACTERISTICS
The property surrounding the project site consists of well established vegetation with minimal slopes at the project site. The property surrounding the project site is mostly grass and brush with some woods to the east of the project site. Due to the nature of the surrounding terrain the project site should not receive any runoff water from off project areas.

DRAINAGE, WATERWAYS, BODIES OF WATER:
The only waterway in the project vicinity is located about 300 ft away west of the project and is an unnamed tributary to the John's River.

TOPOGRAPHY, EXISTING ROADS, BUILDINGS, UTILITIES:
The topography of the project site is fairly flat the gradient sloping north, into Canada. On the project site, there are the north and south bound lanes of Interstate 91 as well as the Caswell Avenue overpass. There is a small closed drainage system located in the median between the north and south bound lanes of the I-91 which will in no way be affected by work on this project due to the location of the work and the slope of the land around that work. There are boarder crossing buildings near the project to the north (Canadian) and to the south (American).

VEGETATION:
The primary vegetation in the project area is grass and brush. There is a small wooded area located just east of the project site. The impact to vegetation will be limited to that which is affected by the widening of I-91 and the grading of 1:4 side slopes. After the project is finished the slopes will be stabilized with vegetation using standard seed and mulch practices.

SOILS:
Because all disturbed soil is immediately adjacent to I-91, it is highly unlikely that the disturbed earth will consist of the "native" soil shown on the U.S. Department of Agriculture Soil Conservation Service maps. The soil on this project consists of crushed stone with low erosion potential.

SENSITIVE RESOURCE AREAS:
There are no 'Threatened & Endangered Species' living on or near the project site and there are no historical, archeological or archeologically sensitive areas on or near the project site.

TEMPORARY EROSION PREVENTION & SEDIMENT CONTROL

TEMPORARY EROSION PREVENTION MEASURES TO BE UTILIZED INCLUDE:
"Project Demarcation Fencing," denoted -PDF- on the plans, to delineate the limits the contractor can access with construction equipment. This measure limits the area that can be disturbed and exposed to erosion.

Temporary check dams will be placed in existing drainage swales with a 1% or steeper slope, or as needed. Check dams are primarily used as an erosion preventative measure. The function of check dams is to reduce the velocities of the stormwater and make it less erosive. There are occasions where check dams serve in the erosion control role as, in these instances, they allow stormwater to pond, thus allowing the sediment within the water to settle out. Temporary check dams will be removed at the end of construction once the soil within the ditch line has been stabilized.

Seeding, mulching will be the primary method of slope stabilization on this project as all disturbed slopes have a slope of 1:4. All slopes shall be stabilized within 48 hours of reaching final grade or during intermittent phases of construction activity.

Tracking of all exposed slopes, combined with temporary mulching, will also be utilized when and where necessary, as determined by the On-site Coordinator or Engineer. Any slopes to be exposed for several days prior to final grading shall be tracked and mulched. The forecast of rainfall events shall also trigger protection of exposed slopes.

TEMPORARY MEASURES TO CONTROL SEDIMENT TRANSPORT INCLUDE:
Silt fence will be installed a distance of 5' to 10' from the toe of slopes to prevent sediment transport to down gradient areas. Each line of silt fence will be placed along the contour with ends turned slightly uphill to create a ponding effect should water try to run along the fencing and around the ends. The maximum slope length between separate runs of silt fence is 100'. Silt fence shall be installed prior to any upslope earthwork.

Measures such as temporary stone check dams, silt fence, and sand bags shall be checked regularly for accumulation of sediment. Sediment build-up shall be removed when the level of sediment reaches one-half the height of the control measure. Sediments shall be disposed of in an area such that they will not be subject to erosion.

Stabilized construction entrances to the project site, staging areas, as well as waste and borrow areas shall be established. The minimum size of a stabilized construction entrance is 12' X 50'. All surface water flowing to or diverted toward a construction entrance shall be piped under the stone. Pipes shall be appropriately sized for the contributing area, however, no pipe smaller then 6" diameter shall be used. See typical detail on 'Erosion & Sediment Control Plan' sheet for materials and construction method to be utilized when constructing a stabilized entrance.

PERMANENT EROSION CONTROL MEASURES

THE FOLLOWING PERMANENT EROSION CONTROL MEASURES WILL BE UTILIZED:
Permanent stabilization and final land treatment will consist of pavement on the roadway and established vegetation in the ditch lines and side slopes.

GENERAL EROSION & SEDIMENT CONTROL GUIDELINES

The Erosion Control Plans are meant as a guideline for preventing erosion and controlling sediment transportation. The work outlined in this narrative consists of applying measures throughout the life of the project to control erosion and minimize the sediment to receiving waters. The measures include stabilization and structural practices, storm water controls and other pollution prevention controls.

Coordinate the installation, use, and removal of erosion and sediment control measures with construction activities to ensure economical, effective and continuous erosion and sediment control. Employ temporary stabilization practices in incremental stages as construction proceeds. The contractor will use additional erosion control measures as necessitated by the sequence of construction and as directed be the engineer. See section 105.23 of the Vermont AOT Standard Specifications for Construction, dated 2001.

Any changes to erosion control measures shall be noted on the plans, in the weekly inspection report, and reported to the appropriate authority in a timely manner. Inspect all control measures weekly and after each rainfall event. Repair measures shall be taken as needed.

Preventing initial soil erosion is much more effective than treating eroded sediment. Therefore, stabilize all disturbed areas promptly after construction activity has temporarily or permanently ceased. Temporary vegetation shall be established if the area is to be without construction activity for a period of 14 days. Perimeter control measures shall be installed following clearing, but prior to the start of any grubbing or grading activity, install other temporary controls in incremental stages as construction proceeds.

Maintaining vegetated buffers along stream banks, wetlands or other sensitive areas is a crucial erosion and sediment control measure that should be established wherever possible.

Do not allow construction equipment to operate on the down slope side of perimeter control measures.

PROJECT NAME: DERBY	
PROJECT NUMBER: IM 091-3(41)	
FILE NAME: D03A088ERO	PLOT DATE: 17-JUL-2006
PROJECT LEADER: A. J. BOMBARDIER	DRAWN BY: J. L. SCHULTZ
DESIGNED BY: J. L. SCHULTZ	CHECKED BY: A.BOMBARDIER
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